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Savannah River Site CITIZENS ADVISORY BOARD

PO Box A

Building 730-B, Room 1184

Aiken, SC 29802

A Department of Energy Site-Specific Advisory Board

July 28, 2009

Mr. Jeffrey M. Allison, Manager
U.S. Department of Energy
Savannah River Operations Office
Aiken, S.C. 29808

Dear Mr. Allison:

SUBJECT: Congratulations to the Savannah River Site (SRS) on Solid Waste Accomplishments

The SRS Citizens Advisory Board (CAB) transmits the attached Commendation with this letter of congratulations to the Department of Energy (DOE) at SRS.

The SRS CAB congratulates SRS on nearing the completion of its legacy PUREX waste program. The SRS-CAB became interested in the legacy PUREX when it was asked for advice on the Consolidated Incineration Facility to treat combustible wastes, which we supported. Since then, with CAB's advice and support over the years, SRS disposed of the aqueous portion of the legacy PUREX in the SRS Effluent Treatment Facility in 2004 and solidified its legacy organic PUREX for shipment to the Nevada Test Site (NTS). Disposition of the legacy PUREX was scheduled for 2019, but will be completed in 2009, a decade earlier than the original milestone.

The SRS CAB also congratulates DOE SRS on its 1,000th shipment of legacy Transuranic (TRU) wastes to the Waste Isolation Pilot Project (WIPP). The SRS CAB has often and strongly supported shipping TRU wastes from SRS, such as new procedures to improve safety for workers, accepting TRU wastes from DOE Mound facility in exchange for accelerating SRS shipments to WIPP, and accelerating the SRS large boxed TRU waste program.

The SRS CAB further congratulates SRS on its decision to investigate the TRU wastes on TRU Pad #1 for shipment to WIPP. We recognize that TRU Pad #1 contains many challenges in the retrieval, packaging, and characterization of waste and in assuring the safety of the SRS workers. At this early date, we do not wish to advise DOE on sending the legacy TRU waste on Pad #1 to WIPP, but we are pleased that SRS is using American Recovery and Reinvestment Act (ARRA) funds to address and resolve this legacy issue.

The SRS CAB not only congratulates DOE at SRS on its three commendable accomplishments above, but also on its history of working with the SRS CAB and other members of the public in soliciting and acting on the public's advice in pursuing the environmental remediation of SRS and the disposition of SRS wastes.

Sincerely,



Manuel Bettencourt, Chair
Savannah River Site - Citizens Advisory Board

Attachment: Commendation to SRS on its Solid Waste Programs

cc w/attch:

Melissa Nielson, EM-13, DOE-HQ

Michelle Hudson, EM-13, DOE-HQ

Jeanie Schwier, Office of the Manager, DOE-SR

Sandra Johnson, Office of the Manager, DOE-SR

Becky Craft, Director, Office of External Affairs, DOE-SR

Robert King, SCDHEC

J.I. Palmer, EPA-Region IV

Albert Frazier, GADNR

Attachment
Commendation to SRS on its Solid Waste Programs

Background

The Savannah River Site (SRS) Citizens Advisory Board (CAB) recognizes the Department of Energy (DOE) at SRS for three of its accomplishments, two that are nearing completion and one that is starting:

The SRS CAB recognizes that SRS is nearing the completion of its “legacy” PUREX program. PUREX is a kerosene-like liquid used to reprocess Plutonium and Uranium in the SRS Canyons (Plutonium-URanium-EXtraction). Earlier reprocessing campaigns produced highly contaminated PUREX which were stored in tanks in the Old Radioactive Waste Burial Grounds, but SRS then relocated the Purex to RCRA-compliant modern tanks as it awaited disposition. While in storage awaiting dispositions, the PUREX settled into an aqueous fraction and an organic fraction. Approximately 12,500 gallons of legacy aqueous and about 25,000 gallons of legacy organic phase PUREX were stored awaiting treatment.

The SRS-CAB became interested in the legacy PUREX when it was asked for advice on the startup of the Consolidated Incineration Facility (“CIF”) to treat combustible wastes (e.g., PUREX), which the CAB supported [Ref. 1]. However, CIF could only incinerate the aqueous or organic PUREX at a relatively low rate due to its radioactive content. CIF incineration of the aqueous portion of the PUREX resulted in treatment of only about 5,000 gallons but at a cost of approximately \$20 million per year [Ref. 14]. Since this cost of incineration was considered excessive relative to the modest disposition, SRS shut down CIF and began to search for alternative treatments. The CAB formed a Focus Group¹ to work with SRS to keep CIF viable until an alternative treatment was found [Ref. 2]. The Focus Group’s work led to several CAB recommendations to DOE-SRS, including treatment by various stabilization and solidification agents [Ref. 3]. With the CAB’s advice, SRS disposed of the aqueous portion in the SRS Effluent Treatment Facility (ETF) in 2004, resulting in a significant improvement in achieving PUREX disposition milestones [Ref. 4]. This improvement was a consideration in South Carolina DHEC’s support of SRS to defer its CIF closure funding and instead solidifying its legacy organic PUREX [Ref. 5].

The recent resolution of the issues raised by the Nevada Attorney General’s office and the acceptance by the Nevada Test Site (“NTS”) for disposal of the treated solidified organic PUREX will complete DOE’s commitment to treat and dispose of the legacy PUREX as soon as the shipments to NTS are completed [Ref. 6]. Completion of the disposition of the legacy PUREX was scheduled for 2019 then moved up to 2007. The aqueous fraction was successfully dispositioned in 2004 and now the organic portion will be completed in 2009, a decade earlier than the original milestone.

The SRS CAB also recognizes that DOE-SRS is approaching its 1,000th shipment of legacy Transuranic (TRU) wastes to the Waste Isolation Pilot Project (“WIPP”). The CAB supported this program by advising DOE to start shipping TRU wastes from SRS and by having a CAB member testify in New Mexico to open WIPP [Ref. 7]. On other occasions, the CAB encouraged new procedures at WIPP to improve safety for workers [Ref. 8]; advised DOE-SRS to accept TRU wastes from the DOE “Mound” facility in exchange for

accelerating its SRS shipments to WIPP (a two-step process that doubled the number of TRU waste drums shipped to WIPP for each drum of TRU waste shipped in from Mound), allowing DOE to close Mound early but also marking Wade Waters as a CAB leader [Ref. 9]; advised DOE to accelerate its large boxed waste program, including the licensing of Trupact III [Ref. 10]; and advised DOE to address the inventory in SRS’s TRU Pad #1 [Ref. 11]. While we understand that the success of the Trupact III shipping container for TRU boxed waste is crucial to the overall success of the TRU waste program at SRS, we are ready to continue to advise DOE on alternatives to its program should the Trupact III licensing process not prove to be successful to complete TRU disposition by 2013 as scheduled [Ref. 13].

The SRS CAB further congratulates SRS on its decision to investigate the TRU wastes on TRU Pad #1 for shipment to WIPP. We recognize that TRU Pad #1 contains many challenges in the retrieval, packaging, and characterization of waste and in assuring the safety of the SRS workers [Ref. 11]. At this early date, we do not

¹ Perry Holcomb and W.F. Lawless were co-technical advisors for the CIF-PUREX Focus Group.

wish to advise DOE on sending the legacy TRU waste on Pad #1 to WIPP. But we are pleased that SRS is using American Recovery and Reinvestment Act (ARRA) funds to address and resolve this legacy issue [Ref. 12 and 13].

Commendation:

The Savannah River Site (SRS) Citizens Advisory Board (CAB) commends the Department of Energy (DOE) at SRS for three of its accomplishments, two that are nearing completion and one that is starting:

The SRS CAB commends SRS on nearing the completion of its legacy PUREX program.
The SRS CAB also commends DOE-SRS on its 1,000th shipment of legacy Transuranic (TRU) wastes to the Waste Isolation Pilot Project (“WIPP”).

The SRS CAB commends SRS on its decision to prepare a safety analysis as part of a safety basis for TRU Pad #1 in order to begin investigations of the waste on TRU Pad #1.

The SRS CAB not only commends DOE at SRS on the accomplishments listed above, but also for its history of working with the CAB and other members of the public in soliciting and acting on the public’s advice in pursuing the environmental remediation of SRS and the disposition of SRS wastes.

References:

SRS CAB Recommendation 25 (1996, September 24), Consolidated Incineration Facility.
SRS CAB Recommendation 133 (2000, November 14), Consolidated Incineration Facility (CIF) RCRA Part B Permit Modification.
SRS CAB Recommendation 146 (2002, January 15), PUREX Recovery Alternatives.
SRS CAB Recommendation 241 (2006, November 17), Progress of PUREX and TRU Waste Disposition.
SRS CAB Recommendation 152 (2002, April 23), PUREX Waste Alternative Treatment Evaluation.
Drozdoft, L.M., P.E., Administrator, State of Nevada, Department of Conservation & Natural Resources, Division of Environmental Protection (2009, May 8), Letter to Frank Marcinowski, Deputy Assistant Secretary, U.S. Department of Energy, Washington, DC: Authorization for the shipment of MLLW to the Nevada Test Site Radioactive Waste Acceptance Program (NTS RWAP). See the accompanying Memo to D. Hintze, DOE-SRS, from NNSA “APPROVAL TO SHIP SAVANNAH RIVER SITE (SRS) MIXED LOW-LEVEL RADIOACTIVE WASTE TO THE NEVADA TEST SITE SRS ... Stabilized Legacy PUREX MLLW”.
SRS CAB Recommendation 111 (2000, January 25), WIPP RCRA Permit/Transuranic (TRU) Waste.
SRS CAB Recommendation 209 (2005, March 29), SRS TRU Waste Issues.
SRS CAB Recommendation 130 (2000, September 26), Mound TRU Waste Shipments to SRS.
SRS CAB Recommendation 210 (2005, March 29), SRS Non-drummed TRU Waste.
SRS CAB Recommendation 4 (1995, March 28), Transuranic Waste; Recommendation 11 (1995, November 28), Transuranic Waste.
H. Belencan presentation to the DOE Savannah River Site Citizens Advisory Board Meeting (2009, March 24), SRS Recovery Act Footprint Reduction Project.
B. Crapse presentation to the DOE Savannah River Site Citizens Advisory Board Waste Management Committee Meeting (2009, June 9), TRU Waste Disposition.
DOE Inspector General (1999), WASTE INCINERATION AT THE SAVANNAH RIVER SITE DOE/IG-0453, AUDIT REPORT.